

Jin Jingling^o Lee Johyung kim Jeong Mi Hye Sook Yun-Choi

Natural Product Research Institute ,Seoul National University,Seoul 110-460

29 species of Vietnamese Plants were tested by modified smearing method for evaluating their inhibitory activity against platelet aggregation induced by ADP and collagen. Through repeated screens, five effective plants *Goniothalamus vietnamensis*, *Myxopyrum nervosum*, *Disporopsis longifoliae*, *Heteropanax fragrans*, *Glycosmis stenocarpa* which showed inhibitory effects against collagen and ADP induced platelet aggregation and four plants *Elaeocarpus angustifolius*, *Aglaia aphanamixis*, *Chloranthus glabra*, *Ardicia conspersa* which showed inhibitory effects against collagen induced platelet aggregation were suggested to be potential inhibitors.

[PA1-23] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Wogonin protects neuronal cells from excitotoxic and oxidative injuries in primary cultured rat cortical cells

Cho Jungsook^o, Lee Hyung-Kyu

Dept of Pharmacology, School of Medicine, Dongguk University, Immunomodulator Research Laboratory, Korea Research Institute of Bioscience and Biotechnology

The present study evaluated neuroprotective effects of 5,7-dihydroxy-8-methoxyflavone (wogonin) on excitotoxic and oxidative stress-induced neuronal damage in primary cultured rat cortical cells. Wogonin attenuated the excitotoxicity induced by N-methyl-D-aspartic acid in a concentration-dependent fashion. In contrast, wogonin did not affect the 2(RS)-amino-3-hydroxy-5-methyl-4-isoxazolepropionate (AMPA)- or kainate-induced toxicity at the concentration ranges of 1 ~ 300 µg/ml. Wogonin, in addition, dramatically inhibited the oxidative neuronal damage provoked by hydrogen peroxide or xanthine/xanthine oxidase. These results suggest that wogonin may exhibit beneficial actions in the treatment of neurodegenerative disorders by modulating both NMDA receptor and oxygen free radicals.

[PA1-24] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Anti-Proliferative Activity of Green Tea Catechin on Vascular Smooth Muscle Cells

Cho MiRa^o, Jeon JinSeon, Cho EnSong, Son JungEn, Park JongBum*, Yun YeoPyo

College of Pharmacy, Chungbuk National University, Cheongju, Korea, *Sama Pharmaceutical Co., Ltd., Seoul, Korea

We have reported the antithrombotic activity and mode of action of green tea catechins (GTC). GTC potently inhibited human platelet aggregation and prevented thrombosis in mice. However, little has been known about functional role in vascular smooth muscle cells (VSMCs). In this study, a possible anti-proliferative effect of GTC on rat aortic VSMCs was investigated. GTC (1-40 µg/mL) significantly inhibited 5% fetal bovine serum (FBS)- and PDGF-BB-induced proliferation of rat aortic VSMCs evaluated by direct counting of cell number and [³H]-thymidine incorporation assay. There was no evidence of cellular toxicity or apoptosis of GTC (40 µg/mL) as determined by trypan blue exclusion assay, flow cytometric analysis and DNA fragmentation assay. The intracellular signaling effect of GTC on the FBS- and PDGF-BB-induced activation of extracellular signal-regulated kinase 1/2 (ERK1/2) and Akt cascade by western blot. Pre-treatment of VSMCs with GTC resulted in a significant inhibition of the FBS- and PDGF-BB-induced phosphorylation of ERK1/2 and Akt kinase. These results indicate that GTC may inhibit vascular smooth muscle cell proliferation through blocking of ERK 1/2 and Akt cascade.